

REMARKS

Applicant's appreciate the Examiner's effort in identifying allowable subject matter and providing suggestions for amendments to the specification and claims to place the claims in allowable form.

New formal drawings were submitted on March 24, 2003, in response to the requirements set forth in the Office Action.

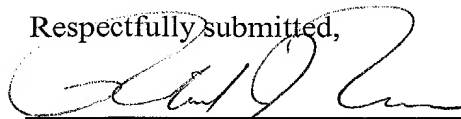
The specification has been amended to identify Fig. 3. and to relocate and define the Brief Description of the Drawings. The specification has also been amended to recite portions of provisional application 60/038,117 to provide proper antecedent basis for the kits defined in claims 42-45.

The claims have been amended as suggested to place the application in condition for allowance. In making these amendments, applicant does not concede any of the rejections set forth in the office action are valid and reserves the right to file a continuation application directed to the cancelled subject matter.

Applicants traverse the rejection of claim 26 under 35 U.S.C. §103 based on the patent to Hammond, et. al. or in the alternative the patent to Hogan, each in combination with the publications by Dyson, Brown or Anderson. It is alleged Dyson teaches washing probes at their T_M . However, no evidence has been identified that one skilled in the art would be motivated to employ the specific probes defined in claim 26 at wash temperatures at or above their calculated T_M .

Based on the above remarks, Applicant's submit that all claims are now in condition for allowance.

Respectfully submitted,



Richard J. Traverso, Registration No. 30,595
Attorney/Agent for Applicants
Telephone: (703) 243-6333

MILLEN, WHITE, ZELANO
& BRANIGAN, P.C.
2200 Clarendon Blvd. Suite 1400
Arlington, Virginia 22201
Facsimile: (703) 243-6410

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CLAIMS WITH MARKINGS TO SHOW THE AMENDMENTS MADE

19. (Currently Three Times Amended) A method for discriminating between species of *Shigella* and *E. coli* or for discriminating among species of *Shigella* and *E. coli* in a sample containing organisms of one or more taxonomic groups comprising:

- a. selecting an oligonucleotide having a sequence from a DNA or RNA operon, wherein the sequence differs by one or more bases from at least one of the operons from the two or more species being discriminated, and wherein the oligonucleotide discriminates between species after hybridization by the use of two or more wash temperatures, at least one of which is above the oligonucleotide's calculated ~~or experimentally determined~~ T_m ;
- b. hybridizing the oligonucleotide to nucleic acid from the sample;
- c. exposing the hybridized oligonucleotide to two or more wash temperatures, at least one of which is above the oligonucleotide's calculated ~~or experimentally determined~~ T_m ; and
- d. determining the presence or absence of hybridized nucleic acid.

26. (Currently Three Times Amended) A method for discriminating between species of *Shigella* and *E. coli* or for discriminating among species of *Shigella* and *E. coli* in a sample containing organisms of one or more taxonomic groups comprising:

- a. selecting an oligonucleotide having a sequence from a DNA or RNA operon, wherein the sequence differs by one or more bases from at least one of the operons from the two or more species being discriminated, and wherein the oligonucleotide discriminates between species after hybridization by the use of two or more wash temperatures at or above the oligonucleotide's calculated T_m or at the experimentally determined T_m ;
- b. hybridizing the oligonucleotide to nucleic acid from the sample;
- c. exposing the hybridized oligonucleotide to two or more wash temperatures at or above the oligonucleotide's calculated T_m or at the experimentally determined T_m ; and
- d. determining the presence or absence of hybridizing nucleic acid,

~~wherein said oligonucleotide comprises a sequence selected from the group consisting of SEQ ID NO: 1, SEQ ID NO: 2, SEQ ID NO: 3 and SEQ ID NO: 4~~

wherein said oligonucleotide consists of the sequence of SEQ ID NO: 4 or wherein said oligonucleotide comprises a sequence selected from the group consisting of SEQ ID NO: 1, SEQ ID NO: 2 and SEQ ID NO: 3.

28. (Currently Twice Amended) The method of claim 48, wherein ~~an~~ oligonucleotide a nucleic acid probe consisting of SEQ ID NO: 2 is used to discriminate between or among Shigella and Escherichia.

29. (Currently Twice Amended) The method of claim 48, wherein ~~an~~ oligonucleotide a nucleic acid probe consisting of SEQ ID NO: 3 is used to discriminate between or among Shigella and Escherichia.

46. (Currently Amended) A method as in claim 19 wherein the hybridized oligonucleotide is ~~oligonucleotides are~~ separated into at least two portions and each portion is exposed to a different wash temperature, at least one of which is above the oligonucleotide's calculated ~~or experimentally determined~~ T_m .

47. (Currently Amended) A method as in claim 26 wherein the hybridized oligonucleotide is ~~oligonucleotides are~~ separated into at least two portions and each portion is exposed to a different wash temperature, at least one of which is above the oligonucleotide's calculated ~~or experimentally determined~~ T_m .